

# Fact Sheet



## For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-09900080-2014**

Application Received: **August 20, 2013**

Plant Identification Number: **03-54-099-00080**

Permittee: **Big Sandy Peaker Plant, LLC**

Mailing Address: **1044 North 115<sup>th</sup> Street, Suite 400, Omaha, NE 68154**

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Physical Location:	Kenova, Wayne County, West Virginia
UTM Coordinates:	360.9 km Easting • 4,245.0 km Northing • Zone 17
Directions:	Site is located between the Big Sandy River and State Route 52 and borders the Kenova Water Authority Treatment Plant on the south and Sunoco Chemical Plant on the North.

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### Facility Description

The Big Sandy Peaker Plant, LLC operates a 330 Megawatt (MW) natural gas-fired electric generating peaking station. The Big Sandy Peaker Plant is covered by SIC Code of 4911 and NAICS Code of 221112. The facility consists of twelve (12) Pratt & Whitney FT8 Twin Pac jet turbine engines arranged so that there is one engine on each end of 6 gas turbine generators. The facility has the potential to operate twenty-four (24) hours a day for seven (7) days per week and fifty-two (52) weeks per years.

## Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2012 Actual Emissions
Carbon Monoxide (CO)	157.18	2.598
Nitrogen Oxides (NO <sub>x</sub> )	247.60	17.632
Particulate Matter (PM <sub>2.5</sub> )	26.23	0.216
Particulate Matter (PM <sub>10</sub> )	26.23	0.216
Total Particulate Matter (TSP)	26.23	0.438
Sulfur Dioxide (SO <sub>2</sub> )	5.36	0.137
Volatile Organic Compounds (VOC)	18.59	0.079
<i>PM<sub>10</sub> is a component of TSP.</i>		
Hazardous Air Pollutants	Potential Emissions	2012 Actual Emissions
Formaldehyde	0.30	0.032
Total HAPs	0.3016	0.047

*Some of the above HAPs may be counted as PM or VOCs.*

## Title V Program Applicability Basis

This facility has the potential to emit 157.18 tons per year of CO and 247.60 tons per year of NO<sub>x</sub>. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Big Sandy Peaker Plant is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

## Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation.

45CSR16	Standards of Performance for New Stationary Sources
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
45CSR30	Operating permit requirement.
45CSR33	Acid Rain Provisions and Permits
45CSR34	Emission Standard for Hazardous Air Pollutants
45CSR39	Control of Annual Nitrogen Oxide Emissions
45CSR40	Control of Ozone Season Nitrogen Oxide Emissions
45CSR41	Control of Annual Sulfur Dioxide Emissions
40 C.F.R. Part 60 Subpart GG	Standards of Performance for Stationary Gas Turbines
40 C.F.R. Part 60 Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
40 C.F.R. Part 61 Subpart M	Asbestos inspection and removal
40 C.F.R. Part 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)
40 C.F.R. Part 64	Compliance Assurance Monitoring
40 C.F.R. Part 72	Permits Regulations
40 C.F.R. Part 73	Sulfur Dioxide Allowance System Permits Regulation
40 C.F.R. Part 74	Sulfur Dioxide Opt-ins
40 C.F.R. Part 75	Continuous Emissions Monitoring
40 C.F.R. Part 76	Acid Rain Nitrogen Oxides Emissions Reduction Program
40 C.F.R. Part 77	Excess Emissions
40 C.F.R. Part 78	Appeals Procedure for Acid Rain Program
40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	
45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

## Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit ( <i>if any</i> )
R13-2383C	October 9, 2013	N/A

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

## Determinations and Justifications

Since R30-09900080-2009 was issued, there have been no changes to the Big Sandy Peaker Plant, LLC's Title V Permit. During review of this renewal, however, Big Sandy Peaker Plant submitted an application for a Class I administrative update, R13-2383C. R13-2383C was approved on October 9, 2013 and those changes were included in the Title V Renewal.

The following updates were made to the renewal permit and include changes related to Class I administrative update R13-2383C:

1. The Emission Unit Table 1.1 was not revised since the facility did not add, revise or delete any equipment between the 2009 renewal and the 2013 renewal.
2. 45CSR34 incorporates and is now cited with 40 C.F.R. Part 61 because 45CSR15 was repealed. The citation for 3.1.3 has been revised accordingly.
3. Since the NO<sub>x</sub> Budget Trading Program 45CSR26 was repealed, the language of the previous Section 3.1.9 was deleted. The remaining sections were renumbered accordingly.
4. Section 3.1.12 was revised to include R13-2383C in the list of NSR Permits.
5. The boilerplate language for Section 3.3.1 was revised with the addition of Section 3.3.1.d and the citation was also revised to expand the authority of the West Virginia state code.
6. Sections 3.5.3 and 3.5.5 were revised according to US EPA Region 3's request that all annual compliance certifications be submitted electronically (e-mail). Also the US EPA Region 3 address in Section 3.5.3 was revised. This is a general change to the boiler plate language.
7. In accordance with the changes made to Condition A.8 of R13-2383C, Section 4.1.8 was revised from:  
  
"The permittee shall install, maintain, and operate a system to monitor emissions of NO<sub>x</sub> from each natural-gas fired turbine pursuant to the procedures under 40 C.F.R. § 60.13 and 40 C.F.R. Part 75."

To:

“The turbines are subject to all applicable limitations and standards under 40 C.F.R. Part 60 Subpart GG (any final revisions made to 40 C.F.R. Part 60 Subpart GG will, where applicable, supersede those specifically cited in this section), including the requirements given below in Sections 4.1.9 through 4.1.12, 4.2.1 and 4.2.2.”

8. Section 4.1.9 was revised for clarity. The language now matches that of 40 C.F.R. §60.332(a).
9. Section 4.1.10 was revised to incorporate 40 C.F.R. §§60.332(a)(3) and (a)(4) since the previous Section 4.1.10 only covered 40 C.F.R. §60.332(a)(1).
10. 40 C.F.R. §60.4211(a) was added as Section 4.1.14. Previous Section 4.1.14 was removed since it is no longer included in R13-2383C.
11. A footnote was added to the table in Section 4.1.17 to provide the basis for the hourly emission limits. Also, the requirements of 40 C.F.R. §60.4206 were added.
12. Section 4.1.18 was revised to include the 40 C.F.R. §60.4211(f) applicable requirements for G1. The 40 C.F.R. §60.4211(e) citation was removed because this requirement does not apply to G1.
13. The previous Section 4.1.19 was removed since the date of “until October 1, 2010” has passed. Requirement 40 C.F.R. §60.4211(g)(3) was added as Section 4.1.19 for G1.
14. Section 4.1.20.b(2) was revised to correct an error. “A minimum aromatic content of 35% by volume” should be “A maximum aromatic content of 35% by volume.”
15. Section 4.2.1 requirement was removed from the Title V permit since it is no longer included in R13-2383C. This requirement was for opacity monitoring and sources subject to 40 C.F.R. 60, Subpart GG are not subject to an opacity standard. The remaining sections were renumbered accordingly.
16. Section 4.2.3 was revised and renumbered as Section 4.2.2 since previous Section 4.2.1 (see Item 15) was removed. Section 4.2.2 corresponds to Condition A.8.e of R13-2383C and 40 C.F.R. §§ 60.334(h)(1) and (3). The amended Section 4.2.2 allows for compliance with the fuel gas sulfur content to be demonstrated with either fuel supplier certification or testing.
17. Sections 4.2.4, 4.2.5, and 4.2.6 were renumbered as Sections 4.2.3, 4.2.4, and 4.2.10.
18. The following requirements were added for 40 C.F.R. 64 Compliance Assurance Monitoring (CAM): proper maintenance (Section 4.2.5); continued operation (Section 4.2.6); response to excursions or exceedances (Section 4.2.7); documentation of need for improved monitoring (Section 4.2.8); and quality improvement monitoring (Section 4.2.9).
19. In Sections 4.2.4 and the 4.7 table (III. Performance Criteria, items C and D), the upper Combustion Turbine Exhaust Gas Temperature (EGT) range was revised from 1369 to 1390 degrees F. The permittee requested the increase to accommodate higher ambient temperatures that occur under certain operating conditions and have caused the engines to exceed the upper EGT indicator of 1369 degrees F. The catalyst bed shall remain within the recommended range for optimum performance.

20. Revised the last sentence of Section 4.2.10 as follows: “The analysis shall be completed ~~within no~~ later than 18 months prior to this ~~permits’~~ permit’s expiration date.”
21. Revised the last sentence of Section 4.3.4 as follows: “Stack testing shall be completed ~~within no~~ later than 18 months ~~of the expiration of the Title V permit~~ prior to the permit’s expiration date.”
22. Added 40 C.F.R. §60.4212 testing requirements for G1 as Section 4.3.5. 40 C.F.R. §60.4211(b) states that compliance with 40 C.F.R. §60.4205(a) [Section 4.1.17] shall be demonstrated according to one of the methods specified in 40 C.F.R. §§60.4211(b)(1) through (5). 40 C.F.R. §60.4211(b)(3) provides the option of keeping records of engine manufacturer data indicating compliance with the standards [Section 4.4.4]. 40 C.F.R. §60.4211(b)(5) requires the permittee to conduct an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 C.F.R. §60.4212 [Section 4.3.5]. As long as the records of engine manufacturer data are maintained in accordance with Section 4.4.4, performance testing specified under Section 4.3.5 will not be required.
23. Section 4.4.5 was added and concurs with Condition B.9 of R13-2383C.
24. Added 40 C.F.R. §60.4214(d) recordkeeping requirements for G1 as Section 4.4.6.
25. Added 40 C.F.R. §§60.334(j)(1)(i) and (j)(2) reporting requirements as Section 4.5.2 for the gas turbines GS-01, GS-02, GS-03, GS-04, GS-05, and GS-06.
26. Attachment B (Phase II Acid Rain Permit) was removed. The facility is required under Section 4.1.13 to hold an Acid Rain Permit, but a copy of that permit will no longer be included as an attachment. This will allow the Acid Rain Permit to be revised or renewed without requiring a modification to the Title V permit.
27. Attachment C (NO<sub>x</sub>) Budget Permit Application was removed since the NO<sub>x</sub> Budget Trading Program (45CSR26) was repealed (see Item 3).
28. Attachment D (CAIR Permit Application) was renamed Attachment B.

### Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

<b>45CSR2</b>	<b>To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.</b> According to R13-2383C the natural gas turbines are subject to 45CSR2. However, the turbines are not indirect heat exchangers and by definition are not fuel burning units. The turbines use the combustion gases to turn the turbine blades. Therefore, 45CSR2 is not listed as an applicable requirement for the turbines in the Title V permit.
<b>40 C.F.R. Part 60 Subpart KKK</b>	<b>Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plant.</b> The Big Sandy Peaker Plant is not engaged in the extraction or fractionation of natural gas liquids from field gas, the fractionation of mixed natural gas liquids to natural gas products, or both.
<b>40 C.F.R. Part 60 Subpart KKKK</b>	<b>Standards of Performance for Stationary Combustion Turbines.</b> <b>Big Sandy Peaker Plant’s turbines were installed in 2000.</b> The Big Sandy Peaker Plant is not subject to 40 C.F.R. Part 60 Subpart KKKK, which is for turbines that commenced construction, modification or reconstruction after February 18, 2005.

<b>40 C.F.R. Part 63 Subpart HH</b>	<b>National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities.</b> The Big Sandy Peaker Plant is not subject to Subpart HH since the Big Sandy Peaker Plant is not a natural gas production facility.
<b>40 C.F.R. Part 63 Subpart HHH</b>	<b>National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities.</b> The Big Sandy Peaker Plant is not subject to Subpart HHH since the Big Sandy Peaker Plant is not a natural gas transmission and storage facility.
<b>40 C.F.R. Part 63 Subpart YYYYY</b>	<b>National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines.</b> The Big Sandy Peaker Plant is not subject to Subpart YYYYY since it is not a major source of HAPs.

### Request for Variances or Alternatives

None.

### Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

### Comment Period

Beginning Date: February 3, 2014  
Ending Date: March 5, 2014

### Point of Contact

All written comments should be addressed to the following individual and office:

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West Virginia Department of Environmental Protection  
Division of Air Quality  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304  
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Carrie.McCumbers@wv.gov

### Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

### Response to Comments (Statement of Basis)

Not applicable.